



ICT IN TEACHER EDUCATION: NEED OF THE HOUR

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Abstract

The major aim of the Teacher Education is to prepare reflective teachers who possess the professional knowledge, skills, technological know-how and dispositions necessary for teaching effectively to students in a diverse and global society. The role of teacher is changing so fast that no amount of pre-service and in-service teacher education can probably cope up with expectations of the society. Information and communication technologies are major factor in shaping the new global economy and producing rapid changes in the society. ICT tools have produced significant transformations in industry, agriculture, medicine, business and engineering. They also have the potential to transform the nature of education. Teacher education institutions may assume a leadership role in the transformation of education.



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INTRODUCTION

Teachers play an important role in the overall development of the child. He is friend and guide of the students. NCFTE (2009) also stressed upon the concept of Humane Teachers. It has been remarked that investment in teacher education requires very little amount of financial resources but it can yield very rich dividends and will result in education of millions. Sometimes it happens that a teacher follows that a particular method of teaching by he was taught by his favorite teacher. Such an attitude creates hindrance in the adoption of new techniques and methods of teaching. Teacher education plays an important role in the professional development of the Teachers. **Mr. Walter., S. Monroe**, Professor Ementus of Education, University of Illionsis observes as follows:

“The main purpose of Teacher Education is to engender the qualifications judged to be necessary for doing the work of teachers. The central task of Teacher’s work is Instruction i.e teaching, stimulating, directing and to guide the learning of pupils.”

The initial preparation of teachers is quite crucial and critically important for professionalizing teacher education. It reflects both, the expectation of community members that they hold about the role of teachers and skills of the individuals who enters in this profession. Professionalization of teacher education emphasize on raising the standard of student- teacher who enters in the profession. Standard of teacher education can be improved

by using different techniques. It includes the application of techniques like interview and observation as a part of assessment procedure, to provide regular opportunities to teachers for their professional development and to start regional institutes for preparing teacher educators. The role of teacher is changing so fast that no amount of pre-service and in-service teacher education can probably to cope up with expectations of the society. The teacher needs to be conceived as 'changing Agent' and not as mere transmitter of knowledge and culture. Teacher education is integral part of any education system. It is connected to the society and is conditioned by ethos, culture and character of nation. Various commissions and committees appointed by the Central and State governments in recent decades have invariably emphasized the need for quality teacher education suited to the needs of society. The National Council for Teacher Education as a non statutory body took several steps as regards quality improvement in teacher education. The challenge confronting our educational systems is how to transform the curriculum and teaching learning process to provide students with skills to function effectively in this dynamic, information rich and continuously changing environment. Education is at the confluence of powerful and rapidly shifting educational technological and political forces that will shape the structure of educational, technological and political forces that will shape the structure of educational systems across the globe for the remainder of this century. Many countries are engaged in the number of efforts to effect changes in teaching learning process to prepare students for information and technology based society. The UNESCO World Education Report (1998) notes that the new technologies challenge traditional concepts of both learning and teaching and by reconfiguring how teachers and learners gain access to knowledge , have the potential to transform teaching and learning process. ICT provides an array of powerful tools that may help in transforming the present isolated, teacher centered and text bound classrooms into rich, student focused, interactive knowledge environment. To meet these challenges, schools must embrace the new technologies and new ICT tools in learning. They must also move toward the goal of transforming the traditional paradigm of learning.

NEED OF ICT IN TEACHER EDUCATION

Technology should be infused in teacher education: pre-service teacher education and in-service teacher education. In pre-service teacher education, throughout their teacher education experience, student will learn about the use of technology and incorporation of ICT in teaching learning process. Technology should be introduced in context and it should not only be restricted to single course and selected subjects. Basic computer literacy-

traditional operating system, word processor, spreadsheet, databases and telecommunications and professional literacy must be taught to the students of pre service teacher education students.

Information and communication technologies are major factor in shaping the new global economy and producing rapid changes in the society. ICT tools have produced significant transformations in industry, agriculture, medicine, business and engineering. They also have the potential to transform the nature of education. Teacher education institutions may assume a leadership role in the transformation of education. But now-a-days, ICT tools play major role in the transformation of education in the society. To reap full and maximum benefits from ICT in the process of teaching and learning, it is essential that pre-service and in-service teachers must have knowledge of new innovative techniques of ICT. Knowledge of new technologies must be provided to teachers so that they can become able to use this knowledge in the context of cultural needs and economic conditions within their country. Teacher education institutes need to provide students with the skills to function effectively in this dynamic, information rich and continuously changing environment.

Teachers get sufficient help from ICT in their task of teaching. Their acquaintance with the relevant source of information in the form of books, journals and other reading material as audio-visual aid material, equipments and telecommunication media makes them able to acquire necessary material and techniques. Programmed learning material, self learning modules, teaching machines and computers helps the teachers in teaching learning process. Use of ICT in teaching learning process helps in the realization of goals of education. This can be discussed as follows:

1. ICT helps teachers to make healthy interaction with students.
2. It helps teachers in preparation of their teaching work.
3. ICT also helps teachers to access with various national and international institutions and Universities, NCERT, NAAC NCTE and UGC etc.
4. It helps in improving Teaching skill, helps in innovative Teaching and employing various techniques of technology.
5. It helps to create effective environment in classroom.
6. It also helps in improving professional Development and Educational management of teacher Trainees.
7. It is replacement of the ancient technology. Now a days students have competitive mind. So teacher must have deep knowledge of the subject and it is only possible through ICT.

8. ICT helps teachers to prepare themselves for teaching. Introduction of ICT in pre-service teacher education will help in employing different methods and strategies.
9. Knowledge of different tools such as word processing, Database, Spreadsheet etc. must be given to teacher trainees. Various technology based plans are used to help the teachers for their practice teaching.
10. ICT prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.
11. ICT can be used as an assisting tool in teacher education, for example, while making assignments, communicating, collecting data & documentation, and conducting research.
12. ICT needs to be as a medium for teaching and learning. It is a tool for teaching and learning itself, the medium through which teachers can teach and learners can learn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.
13. ICT is a popular tool for organization and management in Institutions.
14. Teachers must provide technological support to learn the use of motion picture, animation, simulation training which helps student teachers to give model presentation.

Why do we use ICT in teacher Education?

The classroom is now changing its look from the traditional one i. e. from one way to two way communications. Now teachers as well as students participate in classroom discussion. Now Education is based on child centric education. So, the teachers should prepare to have knowledge of different technologies that can be used in the classroom for making teaching learning interesting. For effective implementation of certain student-centric methodologies such as project-based learning which puts the students in the role of active researches, technology becomes the appropriate tool. ICT has enabled communication better and swifter, made the presentation of ideas more effective and relevant. It is an effective tool of acquiring information. Thus students are encouraged to look for information from multiple sources and they are now more informed than before. So for this reason ICT is very much necessary for Teacher Education. Use of ICT within teacher training programs is being approached in a number of different ways. These ways can be discussed as follows:

- **ICT skills development approach:** Here importance is given to develop the skills among students to use ICT in general. Knowledge about various software and hardware approaches is given and their use in educational process is provided.

- **ICT pedagogy approach:** Emphasis is on integrating ICT skills in a respective subject. Drawing on the principles of constructivism, pre-service teachers design lessons and activities on the basis of ICT tools that will foster the attainment of learning outcomes. This approach is based on the assumption that the use of ICT will enhance literacy skills among students.
- **Subject-specific approach:** Here ICT is embedded into one's own subject area. By this method, subject experts are not only exposing students to new and innovative ways of learning and also provide practical understanding of what learning and teaching with ICT looks and feels like. So, In this way, ICT is not an 'add on' subject but an integral tool and method that is accessed by teachers and students across a wide range of the curricula.
- **Practice driven approach:** Here emphasis is on providing exposure to the use of ICT in practical aspects of teacher training. Focus of this approach is to prepare lessons and assignments by employing ICT.

Recent Trends in Teacher Education:-

Based on various changing needs of our society, now emphasis is also given to the various educational theories and educational practices. According to these theories and practices changes have also taken place in teacher education. It is natural that teacher education must include new technology. Teachers should also know the right attitudes and values, besides being proficient in skills related to teaching. As we know the minimum requirement of any training programme is that it should help the trainee to acquire the basic skills and competencies of a good teacher. Now-a-days new trends in teacher education are Inter-disciplinary Approach, Correspondence courses, orientation courses, Simulated Teaching, Micro Teaching, and Programmed Instruction etc. ICT acts as the gateway to the world of information and helps teachers to be updated. It creates awareness of innovative trends in instructional methodologies, evaluation mechanism etc. for professional development.

The total approach of introducing ICT at the pre-service level is not very serious. It is very clear that student teachers will not get much scope to integrate ICT in curriculum or the teaching-learning process. In teacher training programs at the secondary level, the ICT education scenario is struggling with the following problems:

1. Only at the awareness level, objectives are being achieved, but higher order thinking skills regarding the use of ICT tend not to be occurring.
2. Technology, pedagogy and content area integration is a rare feature.
3. All components are dealt with separately which creates confusion for students.

4. There is a serious discrepancy among syllabi of teacher training institutions and secondary schools.

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